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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,412	08/25/2003	Norio Kaneko	B588-034	3676

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EXAMINER	
SHERMAN, STEPHEN G	
ART UNIT	**PAPER NUMBER**
2629	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/647,412	KANEKO ET AL.	
	Examiner	Art Unit	
	Stephen G. Sherman	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30,32-35,38,40,42 and 43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30,32-35,38,40,42 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 December 2006 has been entered. Claims 30, 32-35, 38, 40 and 42-43 are pending. Claims 31, 36-37, 39 and 41 have been cancelled.

Response to Arguments

2. Applicant's arguments with respect to claims 30, 32-35, 38, 40 and 42-43 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 30, 32-36, 38, 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higami et al. (JP 2000-293253) in view of Ichikawa et al. (JP 05-216,568).

Regarding claim 30, Higami et al. disclose an information input/output apparatus for controlling an operation of a target apparatus on the basis of a user authentication result associated with a user who operates the target apparatus (Drawing 1), comprising:

an image display configured to visually display predetermined image information (Drawing 14 shows a screen 77, which would be the screen of a display.); and

a menu presentation unit, which is arranged on the image display, configured to present a list of a plurality of menu items used to execute an operation of the target apparatus (Drawing 14 shows icons 78a-78f which are set to screen 77 as explained in paragraph [0076]),

wherein the menu presentation unit has a plurality of units arranged in a matrix (Drawing 14 shows multiple icons 78a-78f which are arranged in an array.), each of the plurality of units including a haptic information acquisition unit configured to acquire haptic information of the user on the basis of a position of the menu item that the user touches with a finger of the plurality of menu items presented by said menu presentation unit (Drawing 1 and paragraph [0077] explain that at a step a72 shown in Drawing 13 the central-process section 32 judges whether a fingerprint has contacted the screen. Paragraph [0078] explains that the fingerprint data sensing control section 33 then reads the coordinate data of the position of where the finger contacted the screen, and paragraph [0079] explains that an execution of the different menu options is executed based upon which icon is selected. This means that no matter where on the liquid crystal display the user touches, i.e. which ever icon, input is able to be taken, as explained in paragraph [0041] which states that the sensor is formed in all of the pixels of the liquid crystal display.) and an output unit configured to output information perceivable by the user upon user's touching the haptic information output unit with the finger and arranged at the position of the plurality of menu items (Drawing 14 shows that an output is made for the entire screen 77 of the display, where every icon has an output displayed. The liquid crystal display therefore would have every cell with a sensor and an output capability, which would mean that every icon would also have the same capability.); and

a user authentication unit configured to authenticate the user on the basis of the haptic information acquired by said haptic information acquisition unit (Paragraphs

[0078]-[0079] explain that the fingerprint data sensing control section 33 reads the fingerprint data, which is determined to whether the user is authenticated or not.).

Higami et al. fail to teach of the output unit being able to provide a haptic output.

Ichikawa et al. disclose of an information input/output apparatus (Drawing 5) which provides for input and output haptic units (Paragraphs [0025]-[026]).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to use the idea of providing tactile output to a user as taught by Ichikawa et al. with the input/output device taught by Higami et al. in order to provide the user with a physical recognition of their touching of the screen, which would help someone who is visually impaired.

Regarding claim 32, this claim is rejected under the same rationale as claim 30.

Regarding claim 33, Higami et al. and Ichikawa et al. disclose the apparatus according to claim 32.

Higami et al. also disclose a recognition result output unit configured to inform the user of information indicating whether or not the target apparatus has recognized the user's intention acquired by said user information processor (Paragraph [0078] explains that an error message is provided to the user if he/she is not authenticated and that the action is executed if they are authenticated.).

Regarding claim 34, Higami et al. and Ichikawa et al. disclose the apparatus according to claim 32.

Ichikawa et al. also disclose a haptic information output by said haptic information output unit is information perceived by the user as at least one physical quantity of a three-dimensional pattern, electricity, and calorific value at respective positions of the plurality of menu items (Paragraph [0026] explains that a force feedback is provided to the user, which is a three-dimensional pattern.).

Regarding claim 35, Higami et al. and Ichikawa et al. disclose the apparatus according to claim 32.

Higami et al. also disclose wherein the user is authenticated on the basis of fingerprint information of the user (Paragraph [0078] explains that an error message is provided to the user if he/she is not authenticated and that the action is executed if they are authenticated.).

Ichikawa et al. disclose of the input being detected from a distribution of at least one physical quantity of a pressure and calorific value produced by the finger of the user (Paragraph [0030]).

Regarding claim 38, please refer to the rejection of claim 30, and furthermore also disclose of acquiring a user's fingerprint and authenticating the user on the basis of the user's fingerprint acquired (Paragraphs [0078]-[0079].).

Regarding claim 40, this claim is rejected under the same rationale as claim 38.

Regarding claim 42, please refer to the rejection of claim 30, and furthermore Higami et al. also discloses the haptic information acquisition unit comprising a first function unit configured to detect corresponding haptic information (Figure 1 shows central-process section 32, which as explained in paragraph [0077], detects whether the screen is touched or not.), a second function unit reproduce some or all pieces of detected haptic information (Figure 1 shows fingerprint read station 34), and a third function unit configured to output information perceivable by the user (Paragraphs [0078]-[0079] explain that an error message is sent to the user is they are not authenticated and a menu action is executed if they are authenticated, which means that there is a function to output information to a user.).

6. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higami et al. (JP 2000-293253) in view of Ichikawa et al. (JP 05-216,568) and further in view of Liu et al. (US 5,804,462).

Regarding claim 43, please refer to the rejection of claims 30, 32, 38, 40 and 42.

Higami et al. and Ichikawa et al. fail to teach the haptic information acquisition unit comprising a substrate, a metal oxide layer formed on the substrate, and detects a plurality of different kinds of information by electrodes formed on a plurality of portions obtained by dividing the metal oxide layer.

Liu does teach a haptic information acquisition unit comprising a substrate (Fig. 4, substrate 16), a metal oxide layer formed on the substrate (Fig. 4, layer 36, see col. 3, line 60), and an electrode (Fig. 4, layer 34, see col. 3, lines 10-11), and detects a plurality of different kinds of information (see col. 5, lines 19-25) by electrodes formed on a plurality of portions obtained by dividing the metal oxide layer (Fig. 4, and see col. 5, lines 19-25, where the metal oxide layer 36 is divided here, and will also be divided when multiple sensors are placed on the same chip).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Liu in the touch screen taught by the combination of Higami et al. and Ichikawa et al. in order to detect multiple kinds of haptic information on the same device.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS

17 January 2007

AMR A. AWAD
SUPERVISORY PATENT EXAMINER